

3.04 FUTURE GROWTH PATTERNS

To understand how future growth and development might affect highway operations in the future, the project team analyzed historic growth patterns and developed population and land use projections for each of the jurisdictions along the roadway.

A. Population Projections

The population projections for McFarland and Stoughton used two different methodologies; both based on data from the U.S. Bureau of the Census. The two methodologies provide a range of possible population figures for the future. The first methodology assumed that the average annual number of people added to the two jurisdictions between 1980 and 2000 would be added each year in the future (from 2000 to 2050). In Stoughton, an average of 238 people was added annually between 1980 and 2000 and in McFarland, this figure was 132 people. As shown in Figures 3.04-1 and 3.04-2, this constant number method results in lower future population figures than the second methodology, which assumed that the average annual percentage of people added between 1980 and 2000 would be added each year in the future (from 2000 to 2050). In Stoughton, this rate was 2.5% per year and in McFarland, this rate was 2.7% per year. These growth figures are comparable to those currently under consideration in McFarland's and Stoughton's pending comprehensive land use plans.

	City of Stoughton		Village of McFarland	
	Constant Number	Constant Growth Rate	Constant Number	Constant Growth Rate
	(238 pp/yr)	(2.5%)	(132 pp/yr)	(2.7%)
2000 Census	12,354	12,354	6,416	6,416
2030	19,502	25,687	10,366	14,185
2050	24,267	41,845	12,999	24,075

Figure 3.04-1 Table Showing Population Projections in Stoughton and McFarland

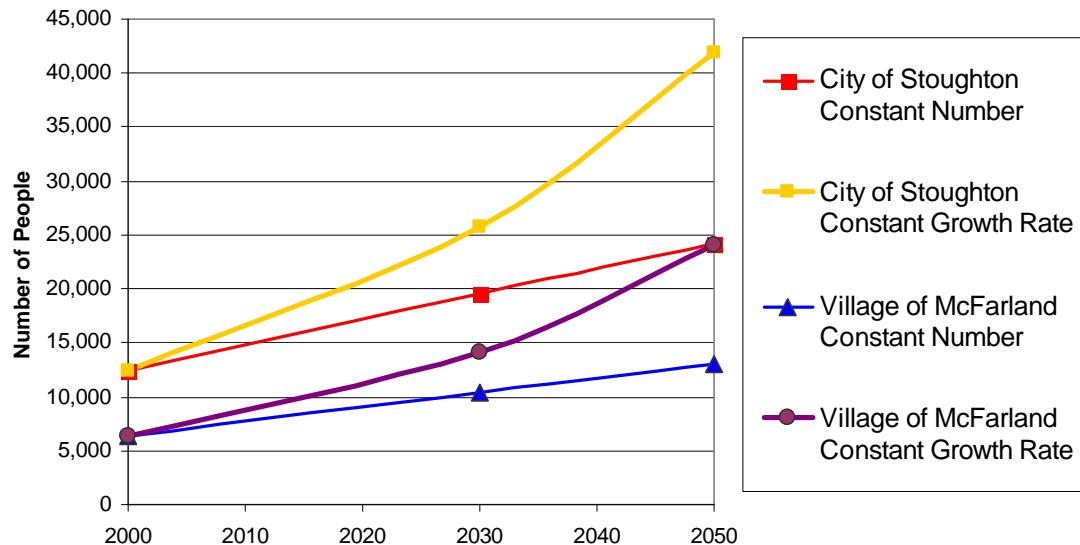


Figure 3.04-2 Graph Showing Population Projections in Stoughton and McFarland

For this study, a third methodology was used for population projections prepared for each of the towns. The methodology used trends in household size and the number of homes added per year between 1980 and 2000. Between 1970 and 2000, rapid declines in the average number of persons per household in the towns in the study area resulted in relatively low population gains, and in several instances, population loss. This decline has almost bottomed out. Currently, there are approximately 2.5 persons per household in the Towns and this was assumed to remain constant. The number of homes added per year between 1980 and 2000 varied among the Towns, from 1.5 dwelling units (du)/year in the town of Dunkirk to over 16 du/year in the town of Pleasant Springs. The number of dwelling units added per year was multiplied by 2.5 to find total population added each year. Town population projections are found in Figures 3.04-3 and 3.04-4.

	Town of Albion	Town of Dunkirk	Town of Dunn	Town of Pleasant Springs	Town of Rutland
2000 Census	1,823	2,053	5,270	3,053	1,887
2030	2,141	2,010	6,143	3,854	2,882
2050	2,358	2,084	6,774	4,592	3,655

Figure 3.04-3 Population Projection for Towns

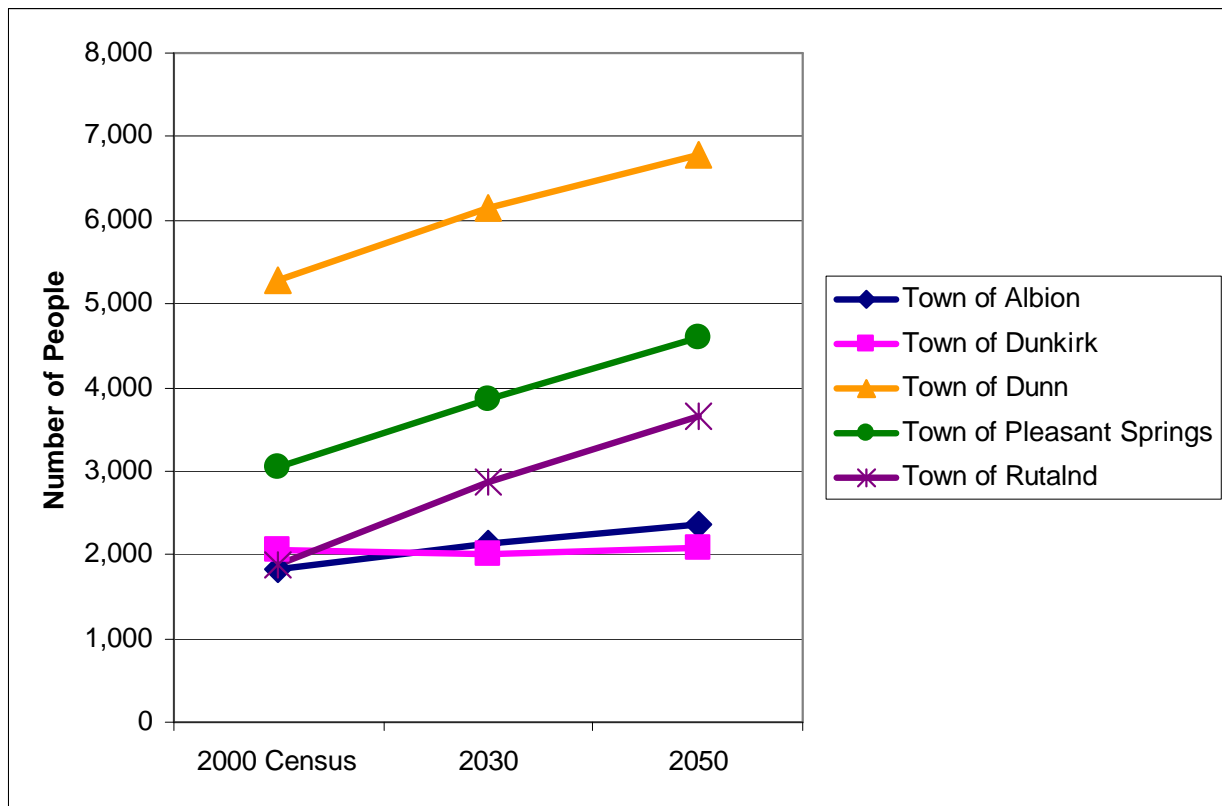


Figure 3.04-4 Population Projections for Towns

As noted earlier, the study team based population projections on trends experienced from 1980 to 2000 in each jurisdiction. The average annual growth rate corridorwide from 2000 to 2030 and from 2030 to 2050 would be approximately 1.2 percent per year assuming the same average number of people added the Stoughton and McFarland annually from 1980 to 2000 continued. This translates to an average annual growth rate of 1.5 percent and 1.6 percent for Stoughton and McFarland, respectively.

Assuming the average annual growth rate that Stoughton and McFarland experienced between 1980 and 2000 remained constant in the future, however, the corridorwide average annual growth rate would be 1.8 percent from 2000 to 2030 and 2030 to 2050. In Stoughton and McFarland this translates into a 2.5 percent and a 2.7 percent rate of growth, respectively.

The Technical Advisory Committee discussed the 2030 and 2050 projections using the two methodologies described above. Looking at the data they felt the projections for 2050 assuming 1.8 percent average annual growth corridorwide were higher than needed (approximately triple today's population) and may be difficult to justify. In addition, the projections for 2030 assuming 1.8 percent growth and those for 2050 assuming 1.2 percent growth were nearly equal. After further discussion and investigation the study team decided to discontinue using the 2050 label and instead refer to the two population projections as *2030 Assuming 1.2 Percent Annual Growth* and *2030 Assuming 1.8 Percent Annual Growth*.

B. Area and Location of Development

The population projections for each local jurisdiction were used as the basis for projecting the amount of land area needed for future development. There was substantial interest in exploring the differences that more compact development patterns might have on travel patterns and volumes – particularly at peak travel times. To examine this issue, four future development projections were made:

- 2030 Assuming 1.2 Percent Annual Growth - Scenario A: Population Projection Mapped with a Continued Development Trends Pattern
- 2030 Assuming 1.8 Percent Annual Growth - Scenario A: Population Projection Mapped with a Continued Development Trends Pattern
- 2030 Assuming 1.2 Percent Annual Growth - Scenario B: Population Projection Mapped with a Compact Development Trends Pattern
- 2030 Assuming 1.8 Percent Annual Growth - Scenario B: Population Projection Mapped with a Compact Development Trends Pattern

Scenario A assumed that the residential and nonresidential development practices and patterns prevalent between 1990 and 2003 would continue through 2030. Scenario B assumed that development in McFarland and Stoughton would become more dense, reflecting the trends exhibited in other Dane County suburban communities (Sun Prairie, Fitchburg, and Middleton) as their populations have grown above 10,000 persons.

Urban residential development served by centralized sanitary sewer systems was assumed to develop at an average overall density of five dwellings per acre in Scenario A and at an average overall density of six and one-half dwellings per acre in Scenario B. All exurban residential development using on-site sanitary sewer systems was assumed to develop at an average overall density of one dwelling per one and one-third acres (.75 dwelling unit per acre). This reflects the typical density of such new developments.

For nonresidential development in both scenarios, the projections assumed that the number of acres of office, commercial, industrial, and institutional development for every 1,000 persons in each town, village, and city would remain consistent over time.

The location of all future development was mapped based on the following methodology:

1. Assignment to vacant parcels based on current Zoning Map designation.
2. Assignment to vacant parcels based on current adopted Land Use Plan map designation.
3. Assignment of urban development to vacant parcels located within partially developed sanitary sewer service basins, with nonresidential development focused on arterial roads as a general extension of the established pattern.
4. Assignment of urban development to vacant parcels located within the most readily served undeveloped sanitary sewer service basins, with nonresidential development focused on arterial roads as a general extension of the established pattern.
5. Assignment of rural development to vacant parcels to complete partially developed plats and other areas identified by road stubs.
6. Assignment of rural development to vacant parcels as a general extension of the established (typically scattered) pattern, with nonresidential development focused on arterial roads.
7. Assignment of limited areas of redevelopment in mixed use land use categories into areas identified by adopted Plans or the consultant as blighted or otherwise “ripe” for land use conversion or clearing and infill construction.

The project’s Technical Advisory Committee reviewed and refined the draft land use maps at two separate meetings. The results were then incorporated into the MPO’s Travel Demand Model for analysis. This analysis indicated only very minor variations in total traffic and travel patterns between Scenario A and Scenario B. This finding seems to reflect the USH 51 corridor and its traffic shed’s dominance in attracting trips from the City and Village, regardless of precise development location. Trips from the outlying rural areas remained focused on traveling on USH 51, STH 138/USH 14, or IH 39/90, depending upon proximity and destination. Such findings also probably reflect on the lack of transit options, which would be more attractive under the compact development scenarios. At this point, the Technical Advisory Committee suggested that the study team carry out the needs assessment using the Scenario A projections.